

PTO/SB/08a (06-03)

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**INFORMATION DISCLOSURE
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1

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Attorney Docket Number

PC32199A

Complete if Known

Application Number

10/593,134

Filing Date

September 18, 2006

First Named Inventor

Michael A. Ellsworth

Art Unit

Examiner Name

U. S. PATENT DOCUMENTS

Examiner Initials*	Cite No. ¹	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code ² (if known)			
		US- 5,593,873	01-14-1997	Mark D. Cochran	
		US- 6,001,613	12-14-1999	Ruben O. Donis	
		US- 6,015,795	01-18-2000	Jan van den Hurk	
		US- 6,606,457	05-09-2000	Youssef Elazhary	
		US- 6,174,667	01-16-2001	Roy Huchzermeier	
		US- 2003/0143573	07-31-2003	Roy Huchzermeier	
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FOREIGN PATENT DOCUMENTS

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		Country Code ³ Number ⁴ Kind Code ⁵ (if known)				
		WO95/12682	05-11-1995	Elizabeth J. Haanes		
		WO99/15900	04-01-1999	Roy Huchzermeier		
		WO99/55366	11-04-1999	Charles M. Rice		

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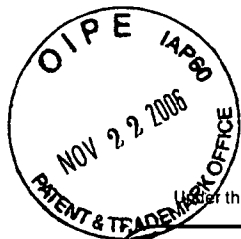
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		STEVEN R. BOLIN, "Control of Boven Viral Diarrhea Infection By Use of Vaccination," Vet. Clin. North Am.: Food Animal Prac., 11:615-625 (1995).	
		CHRISTIANNE J.M. BRUSCHKE, et al., "A subunit vaccine based on glycoprotein E2 of bovine virus diarrhea virus induces fetal protection in sheep against homologous challenge," Vaccine 15:1940-1945 (1997).	
		LEROY COGGINS, et al., "Attenuation of Virus Diarrhea Virus (Strain Oregon C24V) for Vaccine Purposes*", Cornell Vet. 51:539 (1961).	
		M. F. CORIA, et al., "Duration of Active and Colostrum-derived Passive Antibodies to Bovine Viral Diarrhea Virus in Calves," Can. J. Con. Med. 42:239 (1978).	
		ALBERT L. FERNELIUS, et al., "Evaluation of Beta-Propiolactone-Inactivated- and Chloroform-Treated-Virus Vaccines Against Bovine Viral Biarrhea-Mucosal Disease," Am. J. Vet. Res. 33:1421-1431 (1972).	
		M. D. FRAY, et al., "The effects of bovine viral diarrhoea virus on cattle production in relation to disease control," Animal Reproduction Science, 60-61 (2000), 615-627.	
		M. DANIEL GIVENS, et al., "Detection of bovine viral diarrhea virus in semen obtained after inoculation of seronegative postpubertal bulls," AJVR, Vol. 64, No. 4, 428-434, April 2003.	
		M. DANIEL GIVENS, et al., "Bovine viral diarrhea virus in embryo and semen production systems," Vet Clin Food Anim 20 (2004), 21-38.	
		D. M. HAINES, et al., "Monoclonal Antibody-Based Immunohistochemical Detection of Bovine Viral Diarrhea Virus in Formalin-Fixed, Paraffin-Embedded Tissues," Vet. Pathol., 29:27-32 (1992). (Abstract)	
		GARY WILLIAM HORNER, et al., "Comparison of an antigen capture enzyme-linked assay with reverse transcription - polymerase chain reaction and cell culture immunoperoxidase tests for the diagnosis of ruminant pestivirus infections," Vet Microbiology 43 (1995), 75-84.	

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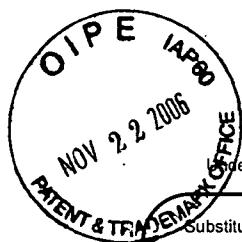
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		P. D. KIRKLAND, et al., "Replication of bovine viral diarrhoea virus in the bovine reproductive tract and excretion of virus in semen during acute and chronic infections," Veterinary Record (1991):128, 587-590.	
		P. D. KIRKLAND, et al., "Insemination of cattle with semen from a bull transiently infected with pestivirus. Veterinary Record, (1997) 140:124-127.	
		P. D. KIRKLAND, et al., "The outcome of widespread use of semen from a bull persistently infected with pestivirus," Veterinary Record (1994) 135, 527-529.	
		JOSEPH R. KOLAR, et al., "Use in Cattle of Formalin-Killed Polyvalent Vaccine with Adjuvant Against Infectious Bovine Rhinotracheitis, Bovine Viral Diarrhea, and Parainfluenza-3 Viruses," Am. J. Vet. Res. 33:1415-1420 (1972).	
		M. LOBMANN, et al., "Clinical evaluation of a temperature-sensitive bovine viral diarrhea vaccine strain," Am. J. Vet. Res. 45:2498 (1984).	
		M. LOBMANN, et al., "Safety of a temperature-sensitive vaccine strain of bovine viral diarrhea virus in pregnant cows," Am. J. Vet. Res. 47:557-561 (1986).	
		A. W. MCCLURKIN, et al., "Selected Isolates of Bovine Viral Diarrhea (BVD) Virus Propagated on Bovine Turbinate Cells: Virus Titer and Soluble Antigen Productions as Factors in Immunogenicity of Killed BVD Virus*", Arch. Virol. 58:119-125 (1978).	
		M. R. MCGOWAN, et al., Early reproductive loss due to bovine pestivirus infection. British Veterinary Journal (1995), 151:263-270.	
		A. MEYLING, et al., "Transmission of Bovine Virus Diarrhoea Virus (BVDV) by Artificial Insemination (AI) with Semen from a Persistently-infected bull. Veterinary Microbiology (1988) 17:97-105.	
		R. NISKAMEN, et al., "Insemination of Susceptible Heifers with Semen from a Non-Viraemic Bull with Persistent Bovine Virus Diarrhoea Virus Infection Localized in the Testes," Reprod Dom Anim 37, 171-175 (2002).	

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		D. J. PATON, et al., "Evaluation of the quality and virological status of semen from bulls acutely infected with BVDV," The Veterinary Record, 1989; 124:63-64.	
		R. M. PHILLIPS, et al., "Evaluation of a Bovine Viral Diarrhea Vaccine Produced in a Porcine Kidney Cell Line", Am. J. Vet Res. 36:135 (1975).	
		J. T. VAN OIRSCHOT, et al., "Vaccination of cattle against bovine viral diarrhoea," Veterinary Microbiology 64 (1999), 169-183.	
		H. VOGES, et al., "Persistent bovine pestivirus infection localized in the testes of an immuno-competent, non-viraemic bull," Veterinary Microbiology 61 (1998), 165-175.	

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